

Research-based Practices to Promote Collaboration Between Parents and Online Schools: A Systematic Review

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This study reviewed 31 articles on parental support and parent-school relationships of K–12 online students. Under the guidance of the Academic Communities of Engagement framework, this literature review explored existing studies on the interactions between online students' personal, course, and school community support. The challenges faced by parents and teachers are described in the discussion. By systematically analyzing the current research on recommended practices for online schools in supporting parents, the authors proposed five themes: (a) Strengthening school-parent communication by keeping parents updated on students' learning progress, (b) Collaborating with parents to help them become more knowledgeable about the content, technology, teaching, and parenting skills they need, (c) Increasing parental involvement in students' coursework and the school community, (d) Seeking for researcher-practitioner collaboration, and (e) Helping parents understand their new roles in supporting online students.

Keywords: K–12 Online learning, online engagement, parental support, parent-school relationship, school support parents, parent-school collaboration, learning engagement

INTRODUCTION

Parental support is critical to students' success in both academic performance and social competence (Hill & Tyson, 2009; Bower & Griffin, 2011; Gonzalez et al., 2013). Previous studies described parental support in in-person school settings as parents volunteering to help in the classroom, go on field trips, attend orientations, and participate in all kinds of school activities (Magnuson & Schindler, 2016; Gonzalez-DeHass et al., 2022). Parental support also includes the support that parents give at home, such as fostering and encouraging their students, setting expectations, and helping with homework (Bower & Griffin, 2011; Gonzalez et al., 2013).

Parent roles in online learning are different from those in in-person learning (Burdette & Greer, 2014). Due to online learning's lack of in-person interactions (Keaton & Gilbert, 2020; Siahaan et al., 2021), parents need to take on some roles traditionally belonging to teachers (Gonzalez-DeHass et al., 2022). Many researchers name parents with the new instructor role as "parent-teacher" (Smith et al., 2016; Hasler-Waters & Leong, 2014). Hasler-Waters and Leong (2014) gave the parent-teacher a new name – learning coach. They summarized learning coaches' general responsibilities as organizing, setting expectations, motivating, mentoring, and monitoring a student's learning progress. Burdette and Greer (2014) identified more parent-teacher roles in their study, such as helping students with content learning, building behavioral skills, and organizing work time.

Parental support during COVID-19 school shutdowns has been studied by many researchers. Because of the sudden transfer from in-person to online teaching, which was called emergency remote teaching (ERT) by Hodges et al. (2020), the mentor role unexpectedly transferred from teachers to parents on a much larger scale. Schools, teachers, students, and parents all encountered many challenges. For example, the quality of learning may have been compromised because of the limited interaction with teachers and the reduced contact hours due to the ERT and the sudden shift of responsibilities from teachers to parents (Grobler, 2022). These challenges precipitated many studies during ERT; however, these studies do not take into account that ERT is different from regular online school settings.

While parental support in in-person learning and ERT contexts have been studied extensively, there is not a comprehensive summary of recommended practices that promote parents' and online school collaboration in support of K–12 students in online school settings. Therefore, the purpose of this literature review is to address this gap and investigate the relationship between parents and schools from previous research. The literature review will explore two review questions:

- RQ1: What does parental support look like in online learning?
- RQ2: What does the literature suggest online schools or programs could do to help parents in their new roles in supporting their online students?

Theoretical Framework

Students' academic and social achievements are influenced by various people and factors (Desforges & Abouchaar, 2003). Parents, teachers, peers, schools, and communities all play a crucial role in shaping the learning experience of students. Engagement is a fundamental element that is necessary for meaningful and effective learning (Kearsley & Shneiderman, 1998), and it is influenced by the collective efforts of parents, teachers, peers, schools, and communities.

For online learning, engagement is even more important. Engagement is a critical factor in online learning because it influences student motivation, achievement, participation, and learning outcomes (Borup et al., 2020). Borup et al. (2020) developed the Academic Communities of Engagement (ACE) framework to explore online learners' engagement in three dimensions: (1) affective, (2) behavioral, and (3) cognitive (ABC) engagement. According to the ACE framework, online learners' engagement can be facilitated by different levels of support, students' personal community, course community, and institutional communities, as demonstrated in Figure 1. The personal community involves individuals with whom a student has a personal relationship, usually outside of school, such as parents, siblings, friends, and others within the student's social network. The course community involves teachers and peers and the relationships that exist within the classroom. The institutional communities involve students' relationships with school principals, counselors, and staff. Since family is the smallest unit of society, children's affections, behaviors, and cognition are preliminarily impacted by their parents or major caregivers (Shaffer & Kipp, 2013; Tus, 2021). School-age students' affective, behavioral, and cognitive abilities are also heavily influenced by their teachers, peers, and schools. Therefore, it is important to discover the interrelationships between personal, course, and institutional community support and to see their impact on online students' engagement.

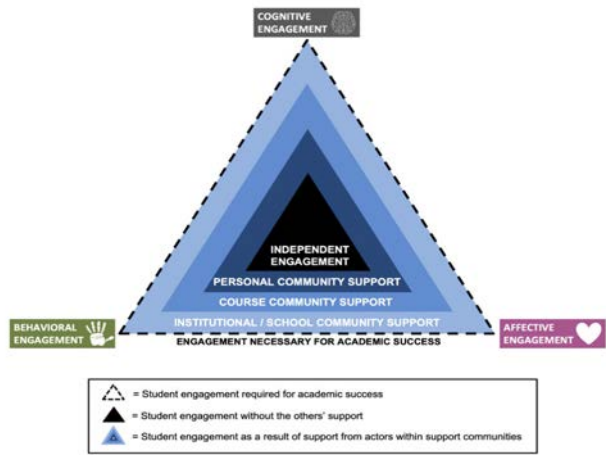


Figure 1. ACE Framework

Note: This figure was created by Jered Borup and Charles R. Graham, CC BY 2.0.

METHOD

The aim of this literature review is to understand the relationship between parents and schools as reported in previous studies and to explore recommendations from the literature on online programs designed to assist parents in supporting their online students. This systematic literature review follows the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA), which guides systematic literature reviews in identifying, selecting, appraising, and synthesizing studies (Page et al., 2021). We began with a database search and then narrowed the scope using inclusion and exclusion criteria. Next, we enriched the literature through expert consultation and snowball research.

Database Search

In this project, we reviewed the research literature to understand the nature of parent/school relationships and how institutions can support parents in their role in students’ learning. First, we use the ERIC (EBSCO) thesaurus to search for the keywords, as shown in Table 1. The results of the search were limited to peer-reviewed (397), full-text (214), and academic journals (183) that ranged from the last 10 years to 2022. Since on-line learning and blended learning have changed greatly in the past decade, 2012–2022 captures the most current research. The search using the thesaurus resulted in 143 articles.

Table 1
ERIC Search Terms and Results

| | Subject | Keywords | Result |
|-----|----------------------------|--|--------|
| AND | Parent-school relationship | Parent School Relationship OR Parent Teacher Cooperation OR School Support OR Parent Responsibility OR Parent Workshops OR Parent Role OR Parents as Teachers OR Caregiver Role OR Family Role OR Parent Influence OR Parent Participation OR Family School Relationship OR School Involvement OR School Role OR Student School Relationship | 58615 |
| AND | Online learning | Electronic Learning OR Virtual Schools OR Blended Learning OR Flipped Classroom OR Computer Assisted Instruction OR Computer Uses in Education OR Distance Education OR Educational Technology OR Online Courses OR Technology Integration | 1661 |
| AND | K-12 education | Elementary Education OR Elementary School Curriculum OR Kindergarten OR Elementary Secondary Education OR Elementary Schools OR Elementary School Students OR Elementary School Teachers OR Secondary Schools OR High Schools OR Junior High Schools OR Secondary Education OR Secondary School Curriculum OR Secondary School Students OR Secondary School Teachers OR High School Students OR High School Teachers OR Middle Schools | 1019 |
| | Limitations | Peer reviewed | 397 |
| | | Full text | 214 |
| | | Academic journals | 183 |
| | | Years of range (2012-2022) | 143 |

Inclusion and Exclusion Criteria

Next, we scanned the titles and subjects of the 143 articles and excluded irrelevant articles, such as those referring to teacher preparation programs or higher education. We only included the articles discussing parent/family-school/teacher relationships or parent roles in K–12 settings in the title or keywords.

This step excluded 68 articles, resulting in 75 articles remaining. In the next two steps, we read the abstracts of the 75 articles and the discussions of 57 of them. Table 2 demonstrates all the inclusion and exclusion criteria.

Expert consultation and snowball research

We then consulted experts for recommendations for research papers that explain different parental support roles in online learning settings. Charles Graham (personal communication, March 2023) identified two articles, Hanny (2022) and Gonzalez-DeHass et al. (2022). The journal reviewers (June 2024) also identified three authors, which led to three articles: Ortiz et al. (2021), Rice and Ortiz (2023), and Stevens and Borup (2015) included in this literature review.

Next, we used the “snowball” method by reviewing reference lists through Google Scholar and adding ten additional articles. In total, 31 articles were included in this literature review as shown in Table 2.

Table 2
Inclusion and Exclusion Criteria

| Criteria | Inclusion | Exclusion | +/- | Remaining # |
|---------------------------|---|--|------|-------------|
| Title and Keywords search | Mentioned anything about the following keywords: School-parent relationship; School-family relationship; Parent teacher cooperation; School support; Parent workshops; Family program; Parent involvement; Parental support; Parent as teachers; LMS on parent involvement. | Articles that do not mention anything about the keywords indicated in the Inclusion Column. | - 68 | 75 |
| Abstract search | Parent/teacher/students views/attitudes on parent-teacher/parent-school engagement/relationship/ collaboration; Special education; Homeschool. | Research not in an online context; Parent views/participation online; Focus only on testing; school responses to Covid-19; Parents/teacher/students view/ attitudes on teacher-student; student-school; teacher-school; parent-student engagement/relationship/collaboration; teacher training; teacher preparation program. | - 18 | 57 |
| Discussion search | Same as abstract search. | The reason/enabler/rational of parental involvement; the relation between parental involvement and students' success/performance; or the relation between school involvement and students' success/performance. | -41 | 16 |
| Expert consultation | Communication from experts of the field, March 2023 and June 2024, identified 5 articles. | | +5 | 21 |
| Snowball | Added from reference lists. | | +10 | 31 |

FINDINGS AND DISCUSSION

In this section, we first explore answers to RQ1 (What does parental support look like in online learning?) by presenting the patterns shown in previous literature regarding parent-school relationships, the challenges parents and online programs face, and the concerns parents have in supporting online students. Then, we answer RQ2 (What does the literature suggest online schools or programs could do to help parents in their new roles in supporting their online students?) by discussing recurring themes observed in previous studies.

Current Parent Support in Online Learning

Parents put much effort into supporting their students' online learning (Borup et al., 2019; Garbe et al., 2020; Kong, 2018), especially those whose children have special education needs (Ortiz et al., 2021; Rice & Ortiz, 2023). In their qualitative study, Curtis and Werth (2015) interviewed eight parents whose students attended an online high school in the Western United States. Parents in this study admitted that they assisted students with assignments regularly, set expectations, motivated, and enjoyed learning together with their students. In Rice and Ortiz's (2023) qualitative study, they interviewed 18 parents whose student has special education needs from nine US states and found that parents support students by actively sharing the responsibility of schoolwork, often finding resources and completing tasks alongside their children. Parents not only share responsibilities with their students but also share feelings with students.

Although parents are involved in students' online learning, the collaboration between parents and schools is limited. In Grobler's (2022) research, teachers reported that there was a lack of parent-teacher collaboration in online learning. This qualitative study investigated 23 first-grade teachers from 12 elementary schools regarding their perception of parental support. Teachers in this study were unsure whether parents received their messages or not, and they were also uncertain whether parents could implement the teachers' learning plan with students by following the teachers' requirements (Grobler, 2022). Often, parents did spend time with their students during their online study, especially for younger kids, but the procedure and method adopted by parents were out of the teachers' control. Because teachers had no control over the parents' implementation of the teacher's instructions, the results could vary widely (Grobler, 2022). Teachers in Uzun et al.'s (2021) qualitative study also reported similar obstacles in communicating with parents.

Parents as Mediators in Teacher-Student Communication

Parents can facilitate teacher-student communication (Stevens & Borup, 2015). Teachers in Borup's (2016) study expressed that parents were even more supportive and responsive to their student's learning in an online setting than they were in an in-person school setting. For students who are too shy or too scared or have any other reasons to avoid communicating with teachers, teachers would talk with students' parents instead to make sure the communication window remained open. Some parents would communicate with their students regarding help-seeking and encourage their students to maintain relationships with teachers. Parents also updated teachers about their students' at-home performance (Borup, 2016).

However, some studies discovered that sometimes parents impede effective teacher-student communication. Teachers in Grobler's (2022) study felt frustrated by not being able to reach their students directly but needed to communicate through parents as mediators. This parallels Borup's (2016) study, in which teachers reported that some "parents would communicate on behalf of the students" (p.75), and some parents tried to make excuses for their students for not responding to teachers. In other words, parents as mediators in teacher-student communication sometimes made teachers feel disconnected from students and out of control of their learning (Hasler-Waters & Leong, 2014).

Parents Need Additional Skills to Support Their Online Students

Many factors influence parents' collaborations with teachers and schools. A key factor is the need for skills to support their children's success in online learning. Online learning demands that parents possess technology literacy, content knowledge, and the ability to mentor and motivate their students. Without these skills, parents may find it challenging to assist with online activities and assignments as requested by teachers.

Limited technology literacy can make it harder for parents to facilitate the use of digital tools for accessing online courses, completing assignments, and attending synchronous sessions (Grobler, 2022). This issue is particularly concerning for lower-grade students, who, due to their age, need more assistance from their parents with using computers and learning software (Gonzalez-DeHass et al., 2022, Guo et al., 2024). Parents in Curtis and Werth's (2015) study reported that students would easily excuse themselves from participating if they struggled to log into their online courses. Consequently, parents with strong technology skills effectively help students persist in online learning.

Challenges in content knowledge and teaching skills can make it difficult for parents to explain content, provide feedback, or answer their children's questions. In his case study, Borup (2016) interviewed 11 teachers at a cyber charter high school to explore their perceptions of parental support.

The teachers noted that parents who may not have a strong background in the subject matter often struggle to answer their students' questions. Even parents knowledgeable about the content can inadvertently confuse their children due to limited teaching experience. As students grow older, many parents find it increasingly challenging to assist with schoolwork.

Parents who are developing their parenting skills may find it tough to motivate, monitor, and teach their children the necessary content and skills for success in online learning. One of the critical areas of parental support is to motivate students (Hanny, 2022). Due to a lack of in-person interaction, students often lose motivation in online learning (Garbe, 2020; Guo et al., 2024). Motivation comes from parents helping their students stay engaged, empathizing with their emotions and struggles, and enabling them to solve problems independently (Novianti & Garzia, 2020).

Another essential area of parental support is to monitor online students (Hanny, 2022). Limited parenting skills can lead to conflicts when monitoring students studying online (Curtis & Werth, 2015). Online learning relies heavily on students' self-regulation (SR), including goal setting, time management, and help-seeking skills (Holzer et al., 2023). Students who lack SR tend to be less successful than those who have developed SR skills (Borup et al., 2019; Ortiz, et al., 2021). Online teachers heavily rely on parents, as children's first teachers, to help students develop SR skills (Carter et al., 2020). Ortiz et al. (2021), in their mixed-method research, revealed that parents supported 80% of their special education students' school work. However, some parents declared not knowing how to teach SR skills to their students in Borup et al. (2019) narrative research on nine parents whose students attended an online charter school. To develop students' online learning SR, Holzer et al. (2023) suggest that parents build positive relationships with children and provide emotional support to them. By doing so, students can learn to manage their actions from their parents' positive role models. Parents who are still developing their parenting skills may struggle with building these relationships, effectively motivating, monitoring, and helping their children develop self-regulation skills.

Missing any of these skills can make it challenge for parents to implement online activities in line with teachers' requirements and to collaborate effectively with schools.

Parents Need Support in Understanding Their New Role

Parents also need support in understanding their new roles in the online learning environment. Previous researchers discovered that parents often did not realize that their role as the parents of online students differs from that in traditional schools (Keaton & Gilbert, 2020; Grobler, 2022; Burdette & Greer, 2014). In their qualitative study, Keaton and Gilbert (2020) interviewed nine students from an online high school with varying academic

levels to explore learner-instructor, learner-parent, and learner-learner interactions. A majority of students indicated that their parents had little involvement in their schooling. Upon analyzing this phenomenon, the authors inferred that because parents were new to the online program, they were unaware of their newly added responsibilities. Additionally, there was no clear definition of these new roles.

Parents' Concerns About Technology Usage and Distraction

From the parents' point of view, there are also many obstacles. Common concerns include students' health, such as worrying about the overuse of technology and excessive screen time (Kong, 2018; Maxwell et al., 2021). In his mixed-method research, Kong (2018) surveyed and interviewed 61 parents from 21 Hong Kong K–12 schools. Parents were concerned that intensive technology usage and screen time might hinder students' interaction with parents, siblings, and friends, potentially leading to a lack of essential in-person skills, such as social, communication, and collaboration skills. Additionally, parents expressed concerns about students' access to inappropriate content and students being easily distracted by games, videos, and other content more appealing than coursework when studying online (Kong, 2018; Maxwell et al., 2021).

Parents Find It Challenging to Keep Students and Themselves Organized

Filling the dual roles of both teacher and parent makes it difficult for parents to separate the two. Because parents are students' caregivers, students may not view their parents as teachers. In Garbe et al.'s (2020) qualitative study, some parents expressed in the open-ended survey that their children cooperate much better with teachers than with parents. Parents in Novianti and Garzia's (2020) study reported that their students treat home as a place to rest and play. While parents appreciate the flexibility that online schooling offers, this flexibility can also lead to disorder (Burdette & Greer, 2014). Since students primarily study at home in online programs, the lack of a strict school schedule makes it challenging for parents to keep their students organized and on task (Novianti & Garzia, 2020).

Another common challenge parents were facing was the difficulty of coordinating their work, taking care of the family, and supporting their children's schoolwork (Novianti & Garzia, 2020; Guo et al., 2024). Some K–8 parents of online students with special needs, surveyed in Burdette and Greer's (2014) mixed-method research, indicated that they do not have enough time to personally help their children with content learning, support them with technology, and monitor their students' learning. Most parents in Garbe et al.'s (2020) study also reported struggling to balance their work responsibilities with spending time with their students. Other parents found it difficult to support multiple students at home, while others expressed concerns about having insufficient time for self-care. In the mixed-method

research conducted by Guo et al., (2024), some parents indicated that their willingness to spend more time with their students was hindered by their full-time jobs and the challenges of being single parents. Many studies have highlighted the same theme that parents felt overwhelmed when coping with so many challenges (Hasler-Waters & Leong, 2014; Borup, 2016; Wai-Cook & Misty, 2020; and Novianti & Garzia, 2020).

Table 3
Challenges in Parental Support of Online Students

| Categories | Description | Citations |
|---|---|--|
| Challenges teachers/schools are facing | | |
| Parent-teacher/school collaboration | Teachers were unsure whether parents received their messages and implemented learning with their students following teachers' requirements. | Grobler (2022); Rice and Ortiz (2023); Uzun et al. (2021) |
| Parents as mediators in teacher-student communication | Teachers' dissatisfaction with indirect communication with learners mediated by parents | Borup (2016); Grobler (2022); Hasler-Waters & Leong (2014); |
| Parents in need of additional skills | Parents need to develop technology, content knowledge, teaching, and parenting skills. | Borup (2016); Carter et al. (2020); Curtis & Werth (2015); Gonzalez-DeHass et al. (2022); Grobler (2022); Guo et al. (2024); Holzer et al. (2023); Novianti & Garzia, (2020) |
| Parents need to understand their new role | Parents' new roles in supporting online students are different from the one of traditional schools | Burdette & Greer (2014); Grobler (2022); Keaton & Gilbert (2020); |
| Concerns or challenges parents are facing in supporting students' online learning | | |
| Technology overuse | Too much screen time | Gonzalez-DeHass et al. (2022); Kong (2018); Maxwell et al. (2021); Ortiz et al. (2021) |
| Loss of in-person skills | Not enough communication and collaboration | Garbe et al. (2020); Keaton & Gilbert (2020); Maxwell et al. (2021) |
| Distractions | Technology as a distraction from school tasks and access to inappropriate contents | Gonzalez-DeHass et al. (2022); Kong (2018); Maxwell et al. (2021); Novianti & Garzia, (2020) |
| Challenging to keep students on track | Parents feel challenged to keep their students organized and on task | Novianti & Garzia (2020); Guo et al. (2024) |
| Hard to balance work and supporting students | Parents struggle to support their students because of their own work pressure or lack of resources | Borup (2016); Burdette & Greer (2014); Garbe et al. (2020); Gonzalez-DeHass et al. (2022); Grobler (2022); Guo et al. (2024); Hasler-Waters & Leong (2014); Novianti & Garzia (2020); Wai-Cook & Misty (2020); |
| Lack of organized resources and parents' community | Resources are everywhere, need one platform to access the organized resources | Garbe et al. (2020); Kong (2018) |

Alongside challenges with limited time and energy, parents also expressed frustration with the overwhelming number of technology tools, resources, and materials that are often unorganized (Garbe et al., 2020; Kong, 2018). They find it difficult to choose the resources they need. Garbe et al. (2020) suggested providing a single platform where parents can access organized resources, such as a learning management system (LMS) (Laho, 2019).

Generally, parents and schools collaborated to support their students' online learning, but they also faced many challenges, as summarized in Table 3.

Current Strategies Online Schools Adopt to Support Parents

Previously, we investigated ineffective school-parent relationships in online learning and the challenges parents are facing. The second focus of this literature review is to explore what online schools or programs could do to help parents in their new roles in supporting online students' engagement. Six themes emerged from reviewing previous studies.

Strengthen School-Parent Communication by Keeping Parents Updated with Students' Learning Progress

Communication between schools and parents is crucial for both parties: it helps parents understand their students' learning and allows schools and teachers to gain insights into how students are doing outside the classroom. Research has shown that schools supported parents through three channels: individual communications from the school about their students' learning; timely feedback about their students' misbehaviors; and encouragement to contact the school if needed (Burdette & Greer, 2014; Johnson et al., 2023). Unresponsive or delayed responses from teachers can make parents feel that their communication is not valued (Stevens & Borup, 2015). Even with minimum communication from the school—about 1–3 times a month—parents still felt supported. To address parents' concerns about the distraction and the loss of in-person skills caused by the overuse of technology, Maxwell et al. (2021), in their mixed-method research, suggest that schools should clearly communicate with parents regarding how school and teachers use technology during class time. This communication could take the form of weekly newsletters that include information on learning activities happening in online classes (Maxwell et al., 2021). Schools can also enhance communication by allowing parents to access the LMS, connecting parents directly with their students' online learning. Parents in Curtis and Werth's (2015) research appreciated the transparency provided by the LMS, which allowed them to easily monitor their students' learning by viewing students' assignments and due dates, accessing lessons and content, and reviewing their students' learning progress. Davidovitch and Yavich's (2015)

quantitative study of the parents of 140 Israeli high school students indicated that schools using an LMS could enhance parental support more effectively than those not using an LMS. To address the issue of poorly organized resources and tools, Laho (2019) suggested using the LMS as a one-stop platform for parents to access all necessary information and resources.

Some schools or teachers also use social media platforms such as WhatsApp and Line to communicate with parents, including creating group chats and sending in-time announcements (Cheng & Chen, 2018; Grobler, 2022; Novianti & Garzia, 2020). However, Cheng and Chen's (2018) quantitative study indicated that excessive messaging may impede teachers' abilities to reply to each individual message, and teachers may not recognize parents using nicknames on social media. To enhance parent-teacher communication through social media, teachers need to establish clear rules to minimize drawbacks. In Burgin et al.'s (2022) study, teachers acknowledged that shifting from in-person to online increased their communication with parents. Holding Zoom meetings with parents and students helped teachers better understand the students and their families. One teacher was even able to guide parents through solving problems, model how to motivate students, and reinforce positive behaviors through social media.

On one hand, online schools should strengthen parent-school relationships by timely informing parents of their student's learning progress and setting regular parent-teacher conferences to discuss students' online performance. On the other hand, online schools should be mindful of the potential negative effects of excessive parental involvement. Research has shown that too much interference from parents can harm students' learning by reducing students' motivation and self-regulation, and potentially causing frustration (Borup, 2016). This can occur when parents feel the need to mediate all student-teacher communications. Schools should work with parents who are heavily involved in their children's learning to address their concerns and help them reduce their stress, thus allowing students to take on more responsibility and accountability for their coursework.

Parents and schools have a mutually supportive relationship. Just as schools provide support to parents, parents can also offer their support to online schools. Parents in Curtis and Werth's (2015) study acknowledged that communication is "a two-way street" (p.173). Parents can communicate with teachers on a regular basis to keep abreast of their children's learning progress at home, enabling schools and teachers to provide effective support to students with their professional expertise (Hasler-Waters & Leong, 2014; Tus, 2021). Actively involved in online schools as volunteers, school PTA, fundraisers, and teachers' appreciation events also help build positive parent-school relationships (Kong, 2018; Guo et al., 2024). In doing so, parents and schools become partners, working together to provide the best education for students (Maxwell et al., 2021; Zimmerman & Brown, 2021).

Provide Training to Parents Regarding Content Knowledge, Technology, Teaching, and Parenting Skills

Johnson et al. (2023), in their literature review on online teaching in K-12 education, summarized that parents typically play a more active role in online learning environments compared to traditional schools. However, they often lack access to resources and information about effective teaching practices that promote student success. In online learning, parents take on instruction roles traditionally handled by teachers. While teachers have received training either through teacher-education programs or their jobs, parents seldom receive any training to help them teach their students (Burdette & Greer, 2014; Garbe et al., 2020). Schools and teachers could address this gap by providing parents with workshops, orientations, or training in effective teaching strategies. This training might include setting expectations, using motivational strategies, managing students' behaviors, building their SR skills, and understanding the fundamental elements of child development (Hanny, 2022; Hasler-Waters & Leong, 2014; Maxwell et al., 2021).

Magnuson and Schindler (2016) reviewed add-on parenting programs and emphasized that not all parental support or services have a positive effect on students' academic outcomes. Parenting programs need to be carefully designed, developed, and implemented. According to Magnuson and Schindler (2016), the most effective parenting programs also need to train their staff to work with parents; target specific skill sets, provide training that connects with these targeted skills; and consider the long-term influence rather than just the short-term effect.

Involve Parents More in Students' Coursework and the School Community

Involving parents in their student's classes or coursework allows parents to actively engage with students' online learning (Johnson et al., 2023). Maxwell et al. (2021) suggested that by creating technology projects that involve family contributions, school learning becomes more transparent for parents. For example, Zimmerman and Brown (2021) explored involving family in Ms. Zimmerman's second-grade class. They proposed three effective ways for engaging families: individual collaboration, classroom-wide interactions, and school/community-wide engagements. For individual collaboration, teachers distribute science activities along with instructions and materials to families, inviting families to share their experiences of conducting science experiments with students, either in an online space created by the teacher or during class time. They also host virtual events, such as virtual game nights, to engage all families for classroom-wide interactions. For school/community-wide engagement, the authors recommend inviting professionals from family members, friends, or community members to share their career experiences and stories with the class. Tus (2021) also suggested including family introductions and culture sharing in class to involve parents.

Schools can further enhance parental support through peer support among parents (Kong, 2018). For example, creating a parent community through a parent-teacher association (PTA) can offer opportunities for parents to share their opinions, concerns, or expectations with schools. This peer community also provides a supportive environment where parents can help each other with practical issues, such as setting home policies, sharing best practices, and exchanging valuable experiences (Kong, 2018).

Public schools have school psychologists who provide counseling services to students. Online schools should also offer similar counseling services and collaborate with parents to accommodate students with physical or mental special needs, address issues with students who exhibit misbehavior, and provide therapy services to parents in need (Borup et al., 2019).

Seek for Researcher-Practitioner Collaboration

Online schools could also partner with research institutions to investigate parents' perceptions of their student's needs and how well they and schools are able to support their students. In a study by Guo et al. (2024), researchers partnered with eight Indiana online schools and programs to examine the challenges and opportunities of parental support. The study surveyed 567 parents involved in these programs. Participants provided constructive feedback, which the researchers used to inform recommendations for the online programs. Researchers could use survey instruments or interviews to explore parents' perspectives, challenges, and expectations. By analyzing the data, researchers could help schools better understand both parents and students. Additionally, researchers could offer interventions such as family involvement programs and checklists, or design effective parent training or workshops to support parents. Ball and Skrzypek (2019) conducted a quasi-experimental research and tested parental involvement through an intervention named Closing the Broadband Gap (CBBG), which aims to facilitate student and parent engagement using technology. This study collected 21 parents' participation in CBBG as well as their perceptions of their knowledge, competency, and overall school experiences regarding their students' engagement from two 4th-grade and two 5th-grade classes during four months. The researchers divided the 21 parents into two groups: 14 were placed in the intervention group, and the remainder were in the comparison group. The study result indicated that parents in the intervention group reported feeling more confident in assisting with their students' assignments, communicating more frequently with students about school, and perceiving greater support from the school.

Table 4
Recommended Practices of School-parent Collaboration in Supporting Online Students

| Recommended Practices | Description | Citations |
|--|---|---|
| Strengthen parent-school communication | Meet with parents in individual or group conferences to give updates on instructions and students' progress. | Borup (2016); Borup et al. (2019); Burgin et al., (2022); Burdette & Greer (2014); Gonzalez-DeHass et al. (2022); Hasler-Waters & Leong (2014); Kong (2018); Maxwell et al. (2021); Smith et al. (2016); Wai-Cook & Misty (2020) |
| | Send weekly/monthly newsletters to parents. | |
| | Parents share students' information with the school. | |
| | Join the school PTA. | |
| Strengthen parent-school communication using online tools | Use LMS and social media to communicate with parents. | Cheng & Chen (2018); Curtis & Werth (2015); Davidovitch & Yavich (2015); Laho (2019); Novianti & Garzia (2020) |
| Provide training to parents | Regarding content knowledge, technology, teaching, and parenting skills. | Borup (2016); Borup et al. (2019); Burdette & Greer (2014); Hanny (2022); Hasler-Waters & Leong (2014); Johnson et al. (2023); Kong (2018); Magnuson & Schindler (2016); Maxwell et al. (2021); Novianti & Garzia (2020); Smith et al. (2016) |
| Involve parents in learning activities | Create technology projects that involve family contributions. | Maxwell et al. (2021); |
| | Include family introductions in class culture sharing; | Tus (2021); Zimmerman & Brown (2021) |
| Other support elements provided within the school community | Establish peer support among parents; Provide online counseling services to students and parents. | Ball & Skrzypek (2019); Borup et al. (2019); Kong (2018); Wai-Cook & Misty (2020) |
| Seek for researcher-practitioner collaboration | Partner with research institutions to investigate parents' perceptions of their student's needs and how well parents and schools are able to support their students | Ball & Skrzypek (2019); Guo et al. (2024) |
| Help parents be aware of their new roles to support online students. | Be more involved in online students' learning. School provide on-site mentors and ongoing parent preparation programs | Burdette & Greer (2014); Grobler (2022); Guo et al. (2024); Keaton & Gilbert (2020); Smith et al. (2016); Ortiz et al. (2021) |

Parents Realize Their New Roles to Support Online Students

By reviewing current studies, we noticed that some parents were aware that their participation in their students' online learning was well beyond their previous experiences in traditional schools (Smith et al., 2016), while some parents were not as involved in their students' online learning (Grobler, 2022). It is important for parents to recognize that their roles in supporting online students differ from those in traditional schools, especially for new parents who may not anticipate the added responsibilities when enrolling their students in online schools (Burdette & Greer, 2014; Grobler, 2022; Guo et al., 2024; Keaton & Gilbert, 2020). Schools are responsible for informing parents of their new roles. But knowing does not necessarily equate to being able to act. Parents should dedicate more time to being with their students, motivating, monitoring, and mentoring their online students, while also developing their ability to answer their students' questions, providing timely feedback, and building their students' online learning skills.

Table 4 summarizes some solutions proposed by previous studies for the challenges identified in the first section of this review.

IMPLICATIONS FOR PARENTS, SCHOOLS, AND FUTURE RESEARCH

In this section, we discuss the vital role parents play in supporting students' online learning and the collaborative efforts required between families, schools, and communities. It highlights the challenges parents face during the transition from traditional to online education, emphasizing the need for their involvement in fostering students' self-regulation skills, addressing technology-related issues, and motivating students. The section also discusses strategies schools can adopt to better support parents, such as offering training sessions, building communication channels, and designing parent-inclusive activities. Finally, it underscores the importance of future research in addressing the challenges identified, implementing potential solutions, and developing interventions that enhance parental support and student engagement in online learning.

A major theme in the literature is the importance of parents being prepared for the transition from traditional to online learning. Firstly, online learning demands that parents spend more time supporting their students (Novianti & Garzia, 2020). Secondly, online learning requires parents to have basic technology skills to set up students' online learning environments, troubleshoot technology issues, and handle emergencies (Grobler, 2022). Additionally, online learning requires parents to mentor, provide guidance, respond to inquiries, and offer constructive feedback to students (Borup, 2016). Further, online learning necessitates that students develop SR skills such as goal setting, help-seeking, and time management. Parents play a crucial role in motivating their students and teaching students these skills (Garbe et al., 2020; Borup et al., 2019).

Parental involvement is essential as it underscores the cooperative aspect of education, integrating the efforts of schools, families, and communities (Johnson et al., 2023). Online learning encourages parents to collaborate closely with teachers and schools (Hasler-Waters & Leong, 2014). To effectively support their online students, it is beneficial for parents to stay updated on parenting, technology, and teaching skills. This helps them better motivate their students, develop students' skills and mindset, maintain a good relationship with students, and foster a collaborative partnership with the online school and teachers (Maxwell et al., 2021; Kong, 2018; Zimmerman & Brown, 2021).

Another theme the literature emphasizes is the critical role of parents in facilitating students' engagement in online learning. To leverage this, it is suggested that schools collect parents' perceptions of students' needs when designing online instructions, as parents have the most direct, in-person interactions with students in online contexts (Ball & Skrzypek, 2019). Further, it is recommended that schools foster communication channels between parents and schools, as well as between teachers and parents. To help parents and students have a smooth transition to online schooling, at the beginning of each semester, schools could provide orientations for both students and parents, offering guidance on course schedules, LMS access, course requirements, the process for establishing goals and expectations, organized learning and tool resources, and peer-parent community.

Additionally, schools could offer workshops or training sessions to equip parents with content knowledge, technology proficiency, teaching strategies, and effective parenting skills (Magnuson & Schindler, 2016). To further strengthen parental support, schools may design learning activities that encourage parental participation and collaboration (Maxwell et al., 2021; Tus, 2021; Zimmerman & Brown, 2021). School counselors and social workers may be involved to identify and intervene when students or parents are disengaged (Ball & Skrzypek, 2019). On-site mentors and ongoing parent preparation programs also help parents realize their roles when supporting online students (Ortiz et al., 2021). As Zimmerman (2021) advocated, "building partnership with families is hard—it takes time, self-reflection, and patience, but it is vital to the success of children" (p.51).

Assessing students' online engagement and the interactions between parents, teachers, and schools in online learning is a significant area of inquiry. Future research could delve deeper into understanding the cause of the challenges identified in this study, which are encountered by parents, teachers and schools. Researchers may consider implementing one or more of the possible solutions proposed in this study and assess the effectiveness of these solutions in addressing the identified issues. We also recommend that researchers collaborate with online schools to investigate parents' perceptions of their students' needs, and the support provided by both themselves and schools.

By prioritizing parental needs, online schools may deploy proper interventions to meet their requirements and foster enhanced support for both parents and students engaged in online learning. Building upon the recommendations of this study, future research could also explore or design online-based interventions to engage parents and investigate the impact on parents' perceptions of school support, students' academic success, and ABC engagement.

CONCLUSION

This literature review investigated the interactions between parents, teachers, and schools as proposed by the ACE framework. The current review highlights that both parents and teachers face many challenges in supporting K–12 students' online engagement. For instance, parents often struggle to understand their evolving role in this new context. Unlike in traditional schools, supporting online students involves parents taking on responsibilities such as motivating, mentoring, monitoring, providing access, organizing, modeling, and managing their students' online learning (Hanny, 2022). Parents who are still developing their technology, teaching, and parenting skills may find it particularly difficult to meet these demands. To address these challenges, offering orientations for parents new to online learning and providing targeted training for those needing additional support would be a possible solution.

Parents also have concerns about their students' technology use and online activities, such as overuse of technology, excessive screen time, and distraction. To address these concerns, schools could grant parents LMS access to provide transparent information (Curtis & Werth, 2015). Keeping parents informed about what students are learning online, what tools or software are being used, and the learning activities involved can help alleviate parental anxieties about technology use. Schools could also design learning activities that require parental input and contributions and encourage parents to introduce themselves in class. By implementing these activities, parents will become more involved in their students' learning and classroom experiences.

Filling the dual roles of both teacher and parent can be overwhelming, especially for parents who have full-time jobs and need to balance family responsibilities, work, and supporting their students' learning. Online schools could involve counselors and social workers to collaborate with parents and students, identifying and providing therapy services to those in need of mental support. Parents are more likely to share their difficulties with their peers, and by listening to and empathizing with each other, they can find support within the peer community. Therefore, introducing parents to peer communities is another way to support them.

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